

REMARKS

The Office Action mailed on November 17, 2005, has been reviewed and the comments of the Patent and Trademark Office have been considered. Prior to this paper, claims 1, 12 and 21-40 were pending, with claims 21-40 being withdrawn from prosecution. By this paper Applicants cancel claims 21-40 without prejudice or disclaimer, and add claims 41-58. Therefore, claims 1, 12 and 41-58 are now pending.

Applicants respectfully submit that the present application is in condition for allowance for at least the reasons that follow.

Indication of Allowable Subject Matter

Applicants thank Examiner Salvatore for allowing claim 12.

Claim Rejections Under 35 U.S.C. §103(a)

In the Office Action, Claim 1 is rejected under 35 U.S.C. §103(a) as being (i) obvious over Adriaensen (WO 98/55682) in view of Zheng (U.S. Patent No. 5,807,430), (ii) as obvious in view of Adriaensen when combined with Czerwinski (U.S. Patent No. 4,308,365), and (iii) as obvious in view of Adriaensen when combined with Daisel (JP 5216465).

Applicants traverse the rejections and respectfully submit that the pending claims are allowable for at least the reason that the first requirement of MPEP § 2143 is not satisfied in the Office Action; the requirement being that there “must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.”

The Office Action proffers economic motivation to modify the prior art to arrive at the present invention. Specifically, the Office Action asserts that the ordinary artisan “would be motivated to look to the prior art to find ways to increase the bond strength between less expensive substrate materials (*i.e.*, *wires*) and matrix material ***to produce a more cost effective reinforcement canvas.***” (Office Action, sentence spanning pages 3 and 4, emphasis added.)¹

However, no evidence has been offered to support this assertion. True Adriaensen does suggest that wires are less expensive. However, the Office Action has not taken into account the increased cost of adding a primer layer to a wire, and thus it is entirely probable that the ordinary artisan would have viewed adding a primer layer as possibly ***increasing*** the cost of the strips. This increase in cost could have flown from, for example, the cost of the primer itself, wire preparation (de-oiling the wire to ensure that the primer will adhere to the wire), heating the wire before or after priming to enhance primer curing, and the added manufacturing time delay resulting from the requirement to provide enough time for the primer to cure before adhering the thermoplastic material to the primed wire. Such costs might have further included material handling costs and material disposal costs, as the primer may be a toxic and/or environmentally unfriendly material, as well as the sunk costs of modifying an assembly line to apply such a primer and to allow for the dry time.

Indeed, the cited “primer” references suggest such increased costs. For example, Zheng teaches a primer that is used for individual applications and not for the mass-production of elongated wires. The primer of Zheng is used to prime discrete surfaces of a first component to which a surface of a second component is to be mated. ***The primer of Zheng must be heat-treated for 30-60 minutes before anything is attached to the primer.*** The artisan of ordinary skill would consider such a long heat-treat time as economically unacceptable for use in coating non-discrete surfaces of elongated wires. Handling an elongated wire coated with a primer that takes 30-60 minutes to cure would have been considered complicated and cost prohibitive by the ordinary artisan.

¹ Applicants assume that the PTO means that the ordinary artisan “***would have been***” motivated, as it is irrelevant to patentability whether the ordinary artisan would currently be motivated to modify references, as the test for obviousness is motivation as of the date of invention, not as of the date of examination.

Regarding Czerwinski, the hot melt coating relied on in the Office Action would also have been seen by the ordinary artisan as complicating the manufacturing process and thus raising costs of manufacture. Daisel, on the other hand, teaches use of a primer containing volatile organic compounds (VOCs). Specifically, Daisel, teaches use of an organic solvent, which may be PVC, epoxy-phenol, or polybutadiene dissolved in organic solvent. VOCs increase manufacturing costs as they are considered environmentally unfriendly compounds which must be handled with increased care in accordance with at least federal regulations. In sum, the ordinary artisan would not have considered utilizing the primers of the cited references as a cost-effective way of utilizing wires.

It appears that the Office Action relies on common knowledge in the art, as is discussed and permitted in MPEP § 2144.03, to satisfy the first requirement of MPEP § 2143 with respect to economic efficiency. However, Applicants note that § 2144.03 allows an applicant “to traverse such an assertion,” and that when an applicant does so, “the examiner should cite a reference in support of his or her position.” (MPEP § 2144.03, second paragraph.) Absent a citation by the PTO of a reference that can be evaluated for all its teachings, Applicants hereby traverse the assertion that it would have been common knowledge in the art that adding a primer layer to enable use of wires would in fact reduce the cost of manufacturing strips with wires relative to the cost of manufacturing strips utilizing cords without a primer layer. **Applicants thus request, relying on § 2144.03, that the PTO cite a reference and exactly identify where such a reference teaches the alleged economic advantages, else allow the claims.**

Assuming *arguendo* that there was motivation to add a primer coating to a strip of the prior art, there is still no motivation in the prior art ***to utilize a primer in a strip welded to a plastic canvas***, and the Office Action does not assert anything to the contrary.² None of the cited references indicate that a thermoplastic strip including a metal element provided with a primer coating may be used to reinforce a canvas. None of these references address the

² Note that Applicants previously amended claim 1 to recite not only a strip as claimed, but also a canvas assembly including a canvas with a strip welded thereto.

problem where significant thermoplastic flow occurs away from the thermoplastic/metal reinforced component during welding of the component to a separate plastic component.

Indeed, there is no identification in the Office Action that this problem was even recognized in the art prior to recognition of the problem by Applicants. In this regard, Applicants note that MPEP 2141.02(III), states that a

patentable invention may lie in the discovery of the source of a problem even though the remedy may be obvious once the source of the problem is identified. This is part of the ‘subject matter as a whole’ which should always be considered in determining the obviousness of an invention under 35 U.S.C. § 103.

There is simply insufficient motivation in the prior art for an ordinary artisan to apply a coating according to any of the “primer” references to a metal member embedded in a strip to be welded to a plastic canvas.

The ordinary artisan would not have been motivated to modify Adriaensen because such an artisan would have been seeking to remedy multiple problems with Adriaensen at once, and would thus have sought out prior art remedies that solved all of these multiple problems, ignoring those remedies that were not known to solve all of the problems. That is, the ordinary artisan would not have modified Adriaensen simply to obtain an economic advantage or to simply improve adhesion. Instead, the ordinary artisan would have sought out prior art that taught (i) alleviation of the problem of significant thermoplastic flow away from the thermoplastic/metal reinforced component during welding of the component to the plastic canvas (assuming *arguendo* that such a problem was known), (ii) alleviation of the problem of low resistance against sharp shear forces (such as accidental clipping by a scissor device), and (iii) alleviation of the problem of low adhesion between elongated metal elements and polymer material – ***all problems that the present invention solves.***

The prior art does not teach a solution to at least either of “i” and “ii,” and thus the ordinary artisan would have ignored combining Adriaensen with the other references because such combination would not have obviously solved the problems associated with “i” and “ii.”

Remember, the ordinary artisan is not an innovator. The ordinary artisan would not have considered modifying Adriaensen with the “primer” references because he or she would not have known that such modification would solve all of his or her problems (assuming *arguendo* that such modification would, in fact, have solved all of his or her problems). Only the innovator experiments with uncertain art to solve problems. In sum, the ordinary artisan would have been even more discouraged from combining Adriaensen with the other cited references for these additional reasons.

Applicants submit that the claims are allowable due to the reasons presented in the prior Responses but not repeated herein, those arguments being incorporated herein by reference.

New Claims

As seen above, Applicants have added new claims 41-58. Claims 41-57 are duplicative of originally pending claims 2-18 except for amended dependencies. Support for these claims is thus present in the originally filed claim set, among other places. Claim 58 recites that the metal member is a wire. Support for this claim may be found, among other places, at page 3, lines 24-25 of the specification as originally filed.

These claims should be allowed for at least the reason that they depend from claim 1, a claim that is allowable, and for the additional reason that the invention of these claims is not obvious in view of the cited references.

Conclusion

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

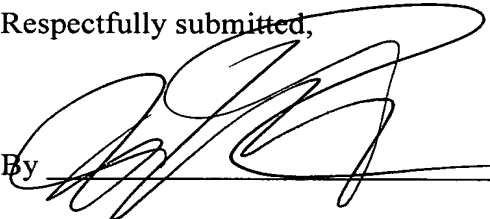
The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Examiner Salvatore is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

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FOLEY & LARDNER LLP
Washington Harbour
3000 K Street, N.W., Suite 500
Washington, D.C. 20007-5143
Telephone: (202) 295-4747
Facsimile: (202) 672-5399

Respectfully submitted,

By 

Martin Cosenza
Attorney for Applicant
Registration No. 48,892